



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,876	09/29/2003	Paul Morton	BP 2858	2341
34399	7590	11/21/2006	EXAMINER	
GARLICK HARRISON & MARKISON			ALAM, FAYYAZ	
P.O. BOX 160727				
AUSTIN, TX 78716-0727			ART UNIT	PAPER NUMBER
			2618	

DATE MAILED: 11/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/673,876

Applicant(s)

MORTON, PAUL

Examiner

Fayyaz Alam

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

Claims 14, 29, and 44 are objected to because of the following informalities: In claims 14, 29, and 44 replace "though" with "through" and in claims 14 and 29 replace "network wireless" with "wireless network". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 - 3, 10, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by **Davis et al. (U.S. Application # 2003/0143987)**.

Consider **claims 1 and 18**, Davis et al. disclose a telematics unit (202) (read as mobile relay device) comprising (see fig. 1 - 2; abstract): a WLAN node (226) (read as first wireless interface) operable to communicate with a wireless device (118) over the wireless network of the vehicle (read as intra-vehicular network); a network access device (232) (read as second wireless interface) operable to communicate with a communication network outside the vehicle (read as extravehicular network); and a

Art Unit: 2618

telematics unit (202) (read as vehicular mountable relay) that communicatively couples the WLAN node (226) (read as first wireless interface) and network access device (232) (read as second wireless interface) and routes communications between the wireless device (118) and the communication network outside the vehicle (read as extravehicular network) (see fig. 1 - 2; abstract).

Consider **claim 2** as applied to claim 1, Davis et al. disclose a wireless device (118) is a cellular radiotelephone which is able to communicate with a WLAN (read as intra-vehicular wireless network and short range digital radio network) within the vehicle and also since it is a cellular phone therefore it can communicate with the cellular network (read as extravehicular network) (see [0023 - 0024]; fig. 1 - 3).

Consider **claims 3 and 19** as applied to claims 2 and 18, Davis et al. disclose WLAN is a Bluetooth network (see [0023]).

Consider **claim 10** as applied to claim 1, Davis et al. disclose telematics unit (202) (read as mobile network relay) comprising GPS (222) (read as extravehicular network is a satellite based wireless communication network) (see fig. 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2618

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 4 - 9, and 11 - 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Davis et al. (U.S. Application # 2003/0143987)** in view of **Hunkeler (U.S. Application # 2005/0288021)**.

Consider **claims 4 and 20** as applied to claims 1 and 18, Davis et al. disclose providing handoff services for the wireless device (118) between a local in-vehicle connection and an external network connection or cellular network connection (read as extravehicular wireless network) (see [0031 - 0034]).

However, Davis et al. fail to disclose a coverage area of the intra-vehicular wireless network overlaps with a coverage area of a premises based wireless network.

In the related field of endeavor, Hunkeler discloses a WLAN (10) (read as intra-vehicular wireless network) coverage area overlapping another WLAN coverage area (read as premises based wireless) and performing handover (see fig. 1; abstract; [0030]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Davis et al. with the teachings of Hunkeler in order to provide interoperability between WLANs.

Consider **claims 5 and 21** as applied to claims 4 and 20, Davis et al. disclose during handoff a third communication link is made while still in communication with the first communication link (read as parallel communication exists to service wireless device; [0033]). A portable wireless communication device is coupled (read as first communication path) to telematics unit (202) by a local connection (read as premises based wireless network). In addition, a portable wireless device directs the network access device (232) that initiates a call (read as second communication path) to a wide area network (read as extravehicular wireless network) via the WLAN node (226) (read as first wireless interface), telematics unit (202) (read as vehicular mountable relay), and the network access device (232) (read as second wireless interface) (see [0031 - 0034]; figs. 1 - 3).

Consider **claims 6 and 22** as applied to claims 4 and 20, Davis et al. disclose that wireless device (118) is a cellular telephone (read as telephone handset) (see [0019]; fig. 1).

Consider **claims 7 and 23** as applied to claims 4 and 20, Davis et al. disclose wireless device (118) is personal digital assistant (see [0019]).

Consider **claims 8 and 24** as applied to claims 4 and 20, Davis et al. fail to disclose handoff from first premises based wireless network to a cellular network to a second premises based wireless network.

In the related field of endeavor, Hunkeler discloses a WLAN (10) (read as first premises based wireless network) coverage area, where the said WLAN's geographical coverage area overlaps with that of various alternative technologies (read as cellular

Art Unit: 2618

network and second premises based wireless network) and handoff services are provided from on technology to another (read as handoff from first premises based wireless network to cellular network to second premises based wireless network) (see [0030]; abstract and fig. 1).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Davis et al. with the teachings of Hunkeler in order to provide interoperability between WLANs and alternative technologies such as cellular at the same time providing an uninterrupted communication link with the same or better level of quality.

Consider **claims 9 and 25** as applied to claims 8 and 24, Davis et al. fail to disclose first premises based wireless network and the second premises based wireless network have non-contiguous service coverage areas.

In the related field of endeavor, Hunkeler discloses WLANs and coverage areas for alternative technologies, where, handoffs are serviced as necessary and as WTRUs move from one coverage area to another, eventually there will be a handoff from a first WLAN (first premises based wireless network) to a second WLAN (read as second premises based wireless network) where the coverage areas will be non contiguous for the two WLANs (read as premises based wireless network) (see fig. 1; abstract; [0030]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Davis et al. with the teachings of Hunkeler in order to provide interoperability between WLANs and

alternative technologies such as cellular and at the same time providing an uninterrupted communication link with the same or better level of quality.

Consider **claims 11 and 26** as applied to claims 6 and 18, Davis et al. disclose wireless communication device of the vehicle (read as vehicular mountable relay) can signal strength of the communication link (read as capabilities of the telephone hand set) (see [0029]).

Consider **claims 12 and 27** as applied to claims 11 and 26, Davis et al. disclose creating a third communication link while still in communication with the first and second link and terminating the first and second communication based upon the signal quality (read as handoff decision based upon the capabilities of the telephone hand set) (see [0029]).

Consider **claims 13 and 28** as applied to claims 12 and 27, Davis et al. disclose wireless device (230) (read a telephone hand set) has a WLAN transceiver (331) and transmitter (323) and receiver (327) (read as Bluetooth, 802.11, and/or cellular interfaces) (see fig. 3; [0024]).

Consider **claims 14 and 29** as applied to claims 13 and 28, Davis et al. disclose a second communication link (read as cellular connection) through the cellular radiotelephone's (read as telephone hand set) cellular interface by way of network access device comprised within the telematics unit (202) has a signal quality determined by the telematics unit (202). A third communication link (read as a communication pathway) is created between the portable wireless communication device and the device associated with the destination number (read as extravehicular

Art Unit: 2618

wireless network) has a signal quality (read as second signal quality) (see [0031 - 0034]). In addition, a controller (204) (read as processor) directs communications of the wireless device be service by the cellular connection or extravehicular wireless network based upon the quality of the signal strengths (read as first and second quality of signals) (see fig. 2; [0031- 0034]).

Consider **claims 15 and 30** as applied to claims 13 and 28, Davis et al. as modified by Hunkeler disclose a processor that directs that communications of the wireless device be serviced by the Bluetooth, 802.11, or cellular interfaces (see fig. 1; [0030 - 0031]), but fail to disclose based on power consumption associated with the Bluetooth, 802.11, and cellular interfaces.

Nevertheless, in another embodiment, Hunkeler discloses establishing connection with alternative technologies (read as Bluetooth, 802.11, and cellular) in a handover situation based on power consumption associated (see pg. 4, claims 1 & 4).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Davis et al. with the teachings of Hunkeler in order to provide interoperability between WLANs and alternative technologies such as cellular and at the same time providing an uninterrupted communication link with the same or better level of quality.

Consider **claims 16 and 31** as applied to claims 5 and 21, Davis et al. disclose wireless communication device of the vehicle (read as vehicular mountable relay) detects the receiver signal strength (read as monitors signal strength) of the first communication link (read as premises based wireless network) and initiates a third

Art Unit: 2618

communication link (read as handoff) between the portable wireless communication device and the device associated with the destination number (read as extravehicular network) and the first is terminated once a third communication link has been established based on signal strength (read as hand off to extravehicular wireless network when the signal strength compares unfavorably to a handoff threshold) (see [0027 - 0030]).

Consider **claims 17 and 32** as applied to claims 1 and 18, Davis et al. disclose transferring parameters between the portable wireless communication device and the network access device (read as wireless device is registered with the first wireless interface) (see [0031]).

Consider **claim 33**, Davis et al. disclose a first communication link by way of WLAN node (226) (read as premises based wireless network) is created between a portable wireless device (read as mobile wireless device) and the network access device of the vehicle would enable transfer of data or audio signals (read as resources available through the premises based wireless network) (see [0027]). In addition, Davis et al. disclose handing off the wireless device using first, second, and third communication links (read as parallel communication pathways) in order to allow continuous communication between the mobile wireless device and the resources (see [0027 - 0030]). Also, during handoff a third communication link is made while still in communication with the first communication link (read as parallel communication exists to service wireless device; [0033]). A portable wireless communication device is coupled (read as first communication path) to telematics unit (202) by a local connection (read

Art Unit: 2618

as premises based wireless network). In addition, a portable wireless device directs the network access device (232) that initiates a call (read as second communication path) to a wide area network (read as extravehicular wireless network) via the WLAN node (226) (read as first wireless interface), telematics unit (202) (read as vehicular mountable relay), and the network access device (232) (read as second wireless interface) (see [0031 - 0034]; figs. 1 - 3).

However, Davis et al. fail to disclose moving the mobile wireless device to an area wherein coverage of the premises based wireless network overlaps an intra-vehicular wireless network; establishing a parallel communication pathways that comprise: a first communication path between the mobile wireless device and the premises based wireless network; and a second communication path between the mobile wireless device and an extravehicular wireless network via a vehicular wireless interface, a vehicular mountable relay, and an extra-vehicular wireless interface; and handing the wireless device from the premises based wireless network to the intra-vehicular wireless network.

In the related field of endeavor, Hunkeler discloses a WLAN (10) (read as intra-vehicular wireless network) coverage area overlapping another WLAN coverage area (read as premises based wireless) and performing handover (see fig. 1; abstract; [0030]). In addition, Hunkeler discloses WLAN network (premises based wireless network) handing over to other WLAN network (intra-vehicular wireless network) (see fig. 1; [0030 - 0031]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Davis et al. with the teachings of Hunkeler in order to provide interoperability between WLANs and alternative technologies such as cellular and at the same time providing an uninterrupted communication link with the same or better level of quality.

Consider **claim 34** as applied to claim 33, Davis et al. disclose WLAN is a Bluetooth network (see [0023]) and parallel communication pathway is cellular network since a cellular radiotelephone is disclosed (see fig. 1 - 3; [0024]).

Consider **claim 35** as applied to claim 33, Davis et al. disclose a first communication link between a portable wireless communication device (read as mobile wireless device) and a wireless communication device of the vehicle (read as vehicular wireless interface) by way of WLAN node (226) (read as vehicular wireless network) relaying communications between the portable wireless communication device (read as mobile wireless device) and transfer of data and audio signals (read as resources) from the wireless communication device of the vehicle (read as vehicular wireless interface), through a telematics unit (202) (read as mobile network relay), and to a network access device (232) (read as extravehicular wireless interface) operable to establish a second communication link (read as communication pathway) with an external network (see fig. 1 - 3; [0027 - 0030]).

Consider **claim 36** as applied to claim 35, Davis et al. disclose that wireless device (118) is a cellular telephone (read as telephone handset) (see [0019]; fig. 1).

Consider **claim 37** as applied to claim 35, Davis et al. disclose wireless device (118) is personal digital assistant (see [0019]).

Consider **claim 38** as applied to claim 35, Davis et al. fail to disclose handoff from first premises based wireless network to a cellular network to a second premises based wireless network.

In the related field of endeavor, Hunkeler discloses a WLAN (10) (read as first premises based wireless network) coverage area, where the said WLAN's geographical coverage area overlaps with that of various alternative technologies (read as cellular network and second premises based wireless network) and handoff services are provided from on technology to another (read as handoff from first premises based wireless network to cellular network to second premises based wireless network) (see [0030]; abstract and fig. 1).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Davis et al. with the teachings of Hunkeler in order to provide interoperability between WLANs and alternative technologies such as cellular at the same time providing an uninterrupted communication link with the same or better level of quality.

Consider **claim 39** as applied to claim 38, Davis et al. fail to disclose first premises based wireless network and the second premises based wireless network have non-contiguous service coverage areas.

In the related field of endeavor, Hunkeler discloses WLANs and coverage areas for alternative technologies, where, handoffs are serviced as necessary and as WTRUs

Art Unit: 2618

move from one coverage area to another, eventually there will be a handoff from a first WLAN (first premises based wireless network) to a second WLAN (read as second premises based wireless network) where the coverage areas will be non contiguous for the two WLANs (read as premises based wireless network) (see fig. 1; abstract; [0030]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Davis et al. with the teachings of Hunkeler in order to provide interoperability between WLANs and alternative technologies such as cellular and at the same time providing an uninterrupted communication link with the same or better level of quality.

Consider **claim 40** as applied to claim 33, Davis et al. disclose telematics unit (202) (read as mobile network relay) comprising GPS (222) (read as extravehicular network is a satellite based wireless communication network) (see fig. 2).

Consider **claim 41** as applied to claim 33, Davis et al. disclose wireless communication device of the vehicle (read as vehicular mountable relay) can signal strength of the communication link (read as capabilities of the telephone hand set) (see [0029]).

Consider **claim 42** as applied to claim 41, Davis et al. disclose creating a third communication link while still in communication with the first and second link and terminating the first and second communication based upon the signal quality (read as handoff decision based upon the capabilities of the telephone hand set) (see [0029]).

Consider **claim 43** as applied to claim 42, Davis et al. disclose wireless device (230) (read a telephone hand set) has a WLAN transceiver (331) and transmitter (323)

Art Unit: 2618

and receiver (327) (read as Bluetooth, 802.11, and/or cellular interfaces) (see fig. 3; [0024]).

Consider **claim 44** as applied to claim 43, Davis et al. disclose a second communication link (read as cellular connection) through the cellular radiotelephone's (read as telephone hand set) cellular interface by way of network access device comprised within the telematics unit (202) has a signal quality determined by the telematics unit (202). A third communication link (read as a communication pathway) is created between the portable wireless communication device and the device associated with the destination number (read as extravehicular wireless network) has a signal quality (read as second signal quality) (see [0031 - 0034]). In addition, a controller (204) (read as processor) directs communications of the wireless device be service by the cellular connection or extravehicular wireless network based upon the quality of the signal strengths (read as first and second quality of signals) (see fig. 2; [0031- 0034]).

Consider **claim 45** as applied to claim 43, Davis et al. as modified by Hunkeler disclose a processor that directs that communications of the wireless device be serviced by the Bluetooth, 802.11, or cellular interfaces (see fig. 1; [0030 - 0031]), but fail to disclose based on power consumption associated with the Bluetooth, 802.11, and cellular interfaces.

Nevertheless, in another embodiment, Hunkeler discloses establishing connection with alternative technologies (read as Bluetooth, 802.11, and cellular) in a handover situation based on power consumption associated (see pg. 4, claims 1 & 4).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Davis et al. with the teachings of Hunkeler in order to provide interoperability between WLANs and alternative technologies such as cellular and at the same time providing an uninterrupted communication link with the same or better level of quality.

Consider **claim 46** as applied to claim 45, Davis et al. disclose wireless communication device of the vehicle (read as vehicular mountable relay) detects the receiver signal strength (read as monitors signal strength) of the first communication link (read as premises based wireless network) and initiates a third communication link (read as handoff) between the portable wireless communication device and the device associated with the destination number (read as extravehicular network) and the first is terminated once a third communication link has been established based on signal strength (read as hand off to extravehicular wireless network when the signal strength compares unfavorably to a handoff threshold) (see [0027 - 0030]).

Consider **claim 47** as applied to claim 33, Davis et al. disclose transferring parameters between the portable wireless communication device and the network access device (read as wireless device is registered with the first wireless interface) (see [0031]).

Conclusion

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Fayyaz Alam whose telephone number is (571) 270-1102. The Examiner can normally be reached on Monday-Friday from 9:30am to 7:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Edan Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Art Unit: 2618

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Fayyaz Alam

November 8, 2006

EDAN ORGAD
PATENT EXAMINER/TELECOMM.

Edan Orgad 11/13/06